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October 6, 2017

VIA ELECTRONIC FILING

Ms. Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

Re: ViaSat, Inc., Notice of *Ex Parte* Presentation, GN Docket No. 14-177; IB
Docket Nos. 15-256 & 97-95; RM-11664; and WT Docket No. 10-112

Dear Ms. Dortch:

On October 4, 2017, Mark Dankberg and Chris Murphy of ViaSat, Inc. (“ViaSat”), Amy Mehlman of Mehlman Capitol Strategies, and the undersigned, met with Chairman Pai and his advisor, Rachael Bender regarding issues presented in the Spectrum Frontiers proceeding. The attached presentation formed the basis for the discussion.

In particular, ViaSat urged that:

- The Commission maintain the longstanding primary designation of the 48.2-50.2 GHz uplink band segment for unfettered satellite gateway and user terminal deployment.
 - Any terrestrial use that may be permitted in this band segment should not impair satellite uses.
- Satellite earth stations also need access to the 47.2-48.2 GHz and 50.4-52.4 GHz uplink band segments.
 - The inherent compatibility of small gateway earth stations allows them to share these band segments without impairing terrestrial uses.
 - Where no terrestrial impairment would occur, there is no need to restrict the deployment of those gateways.

Please contact the undersigned if you have any questions regarding this submission.

LATHAM & WATKINS^{LLP}

Respectfully submitted,

/s/

John P. Janka

Attachment

cc: Chairman Ajit Pai
Rachael Bender

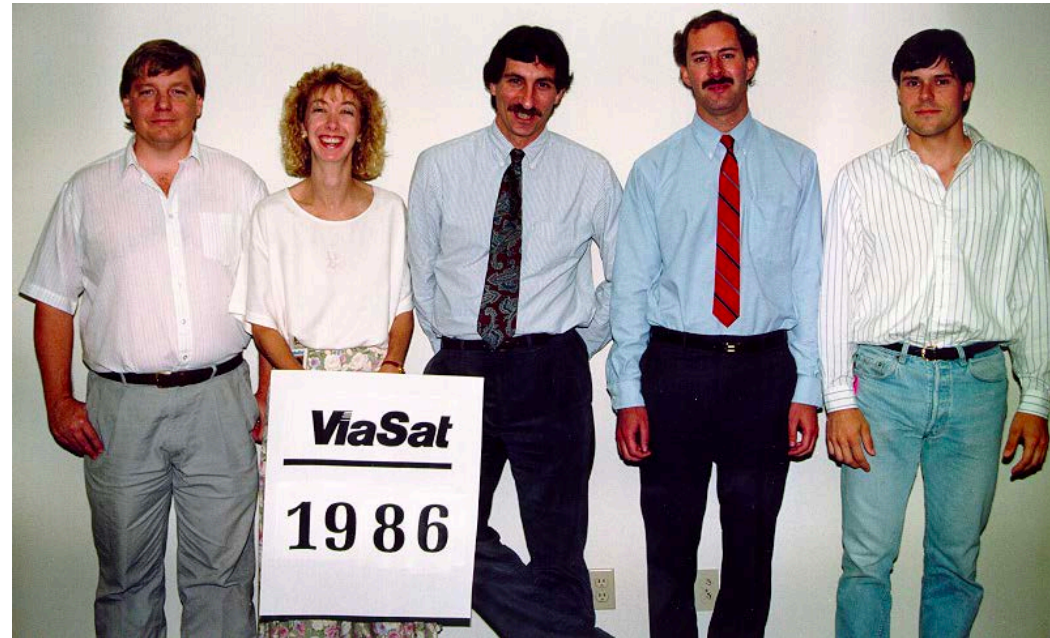
Spectrum Frontiers

Satellite Broadband Access and V Band Coexistence



ViaSat History

- » Founded 1986
- » Uniquely American story
- » No outside capital
- » Garage start-up
- » Today
- » NASDAQ listed
- » ~4700 employees in 11 states
- » \$3.8B market cap
- » Satellite, wireless, fiber optics, cybersecurity



Satellite Broadband Demand

- » ViaSat connects people to fiber through state-of-the-art broadband networks EVERYWHERE
 - › Cloud services require continuous & ubiquitous connectivity
- » Exponential growth in demand for satellite broadband
 - › Rural broadband (especially video streaming and downloads)
 - › In-flight connectivity (36M/yr active users today to several 100M/yr in 2021)
 - › Mobile vehicles (connected cars, drones, trains, ships)
 - › National defense
 - › Continuity of government
 - › Border protection
- » Demand outstrips current supply!

Because no other satellite company would...

ViaSat-1

- 140 Gbps
- 1.5 GHz spectrum
- Launched 2011

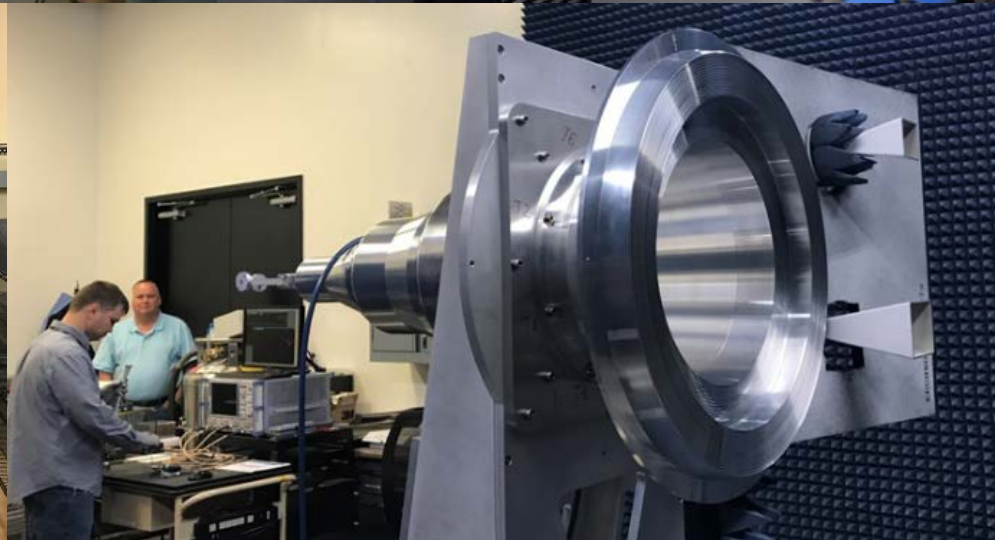
ViaSat-2

- 300 Gbps
- 2.1 GHz spectrum
- Launched 2017

ViaSat-3

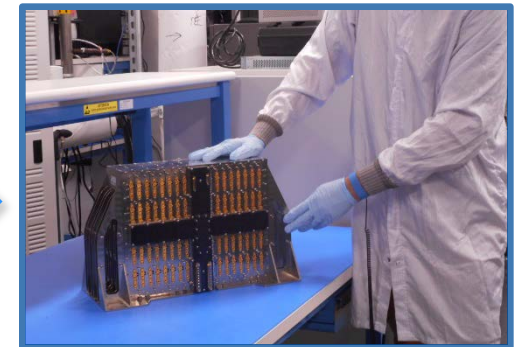
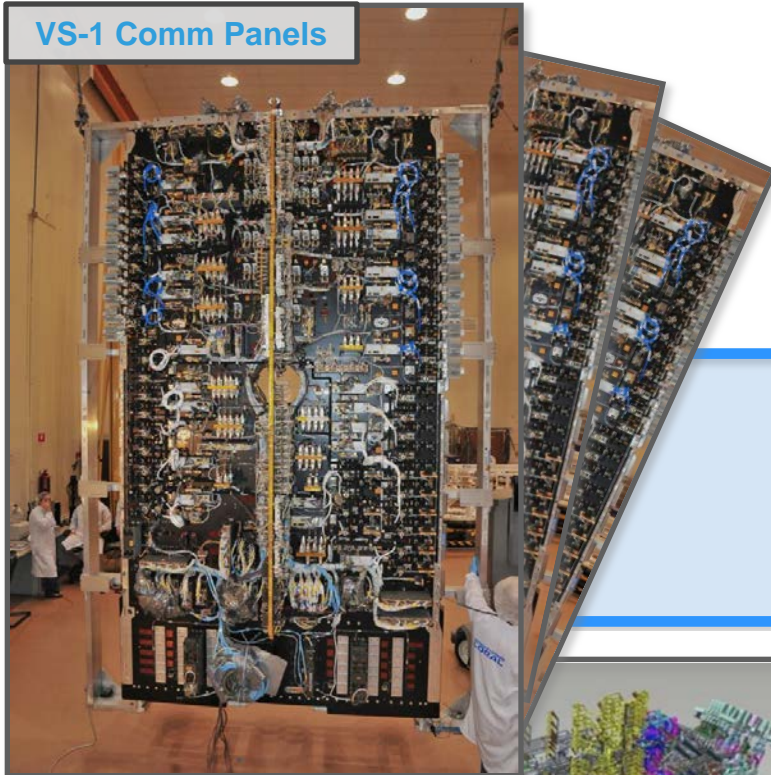
- Over 1 Tbps
- Under construction

New ViaSat-3 Manufacturing Facility

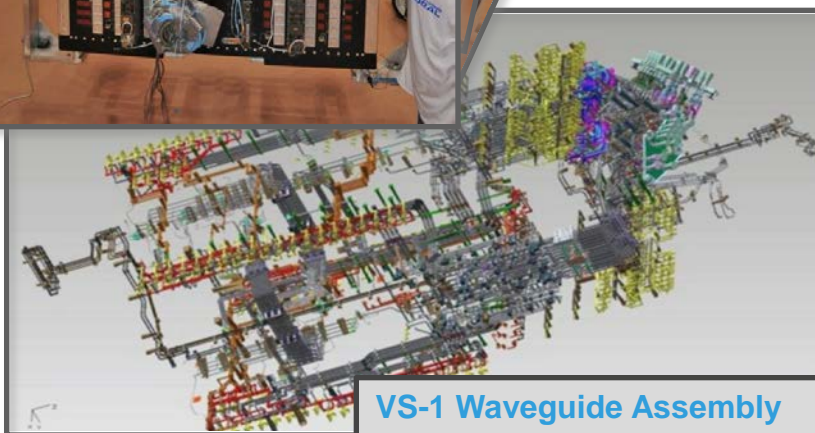


ViaSat-3 State-of-the-Art Infrastructure

VS-1 Comm Panels



VS-3 Comm Module



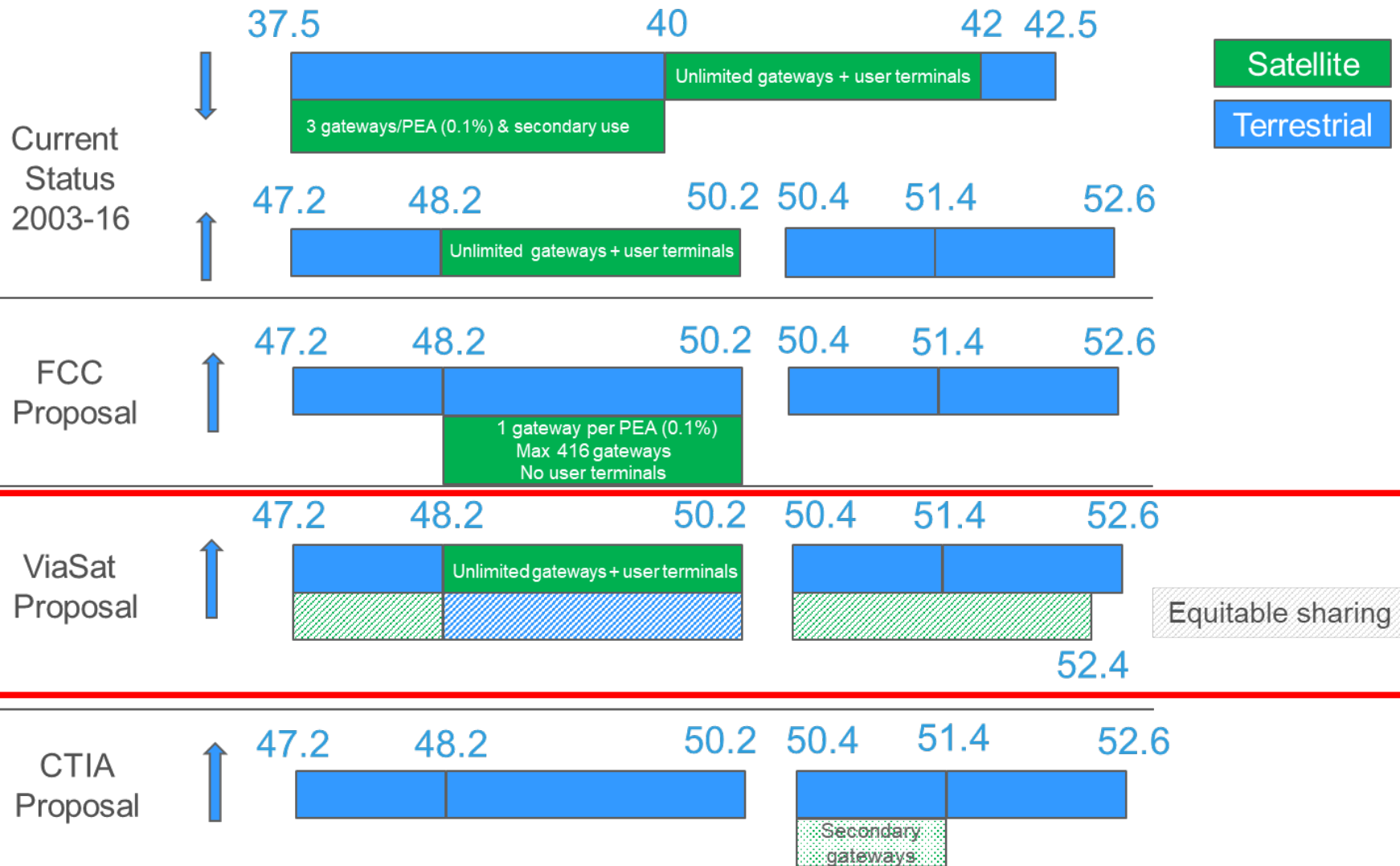
VS-1 Waveguide Assembly

Each ViaSat-3 has nearly ~10x the bandwidth of ViaSat-1

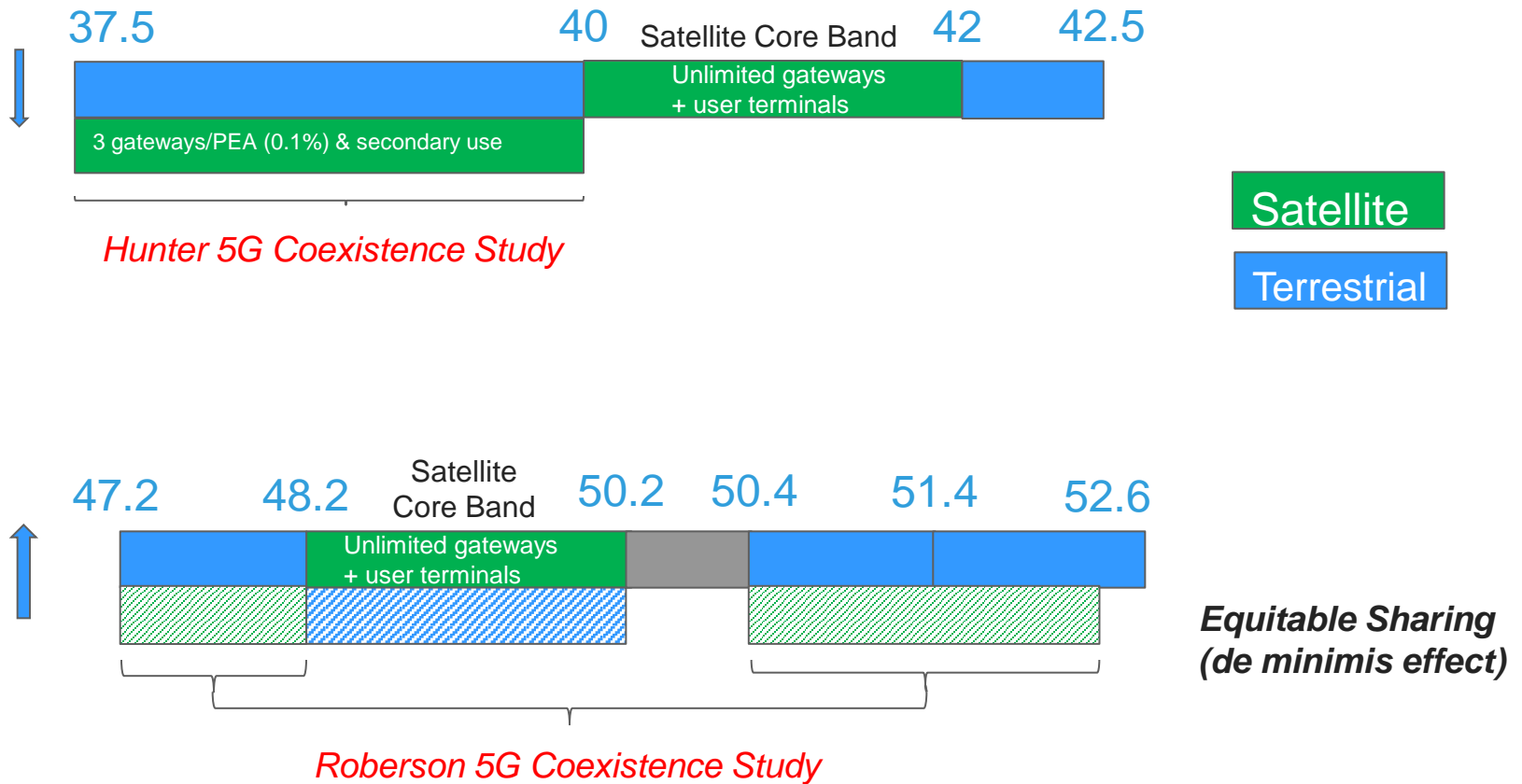
Demand Requires V Band Access for Satellite

- » Ka band is essentially filled
 - › Modern satellites are very close to theoretical spectral capacity limits
 - › ViaSat satellites are the highest capacity commercial satellite networks ever built
- » V band access for satellite is critical
 - › More bandwidth enables
 - › Faster speeds
 - › More GigaBytes
 - › Lower prices
 - › New services
 - › Extending coverage to millions of rural Americans
 - › To complement terrestrial 5G – in the air, on the ground, at sea, border protection, national defense, in space
- » Retaining core 2 x 2 GHz for satellite is essential
- » Spectrum sharing in additional spectrum requires new approaches

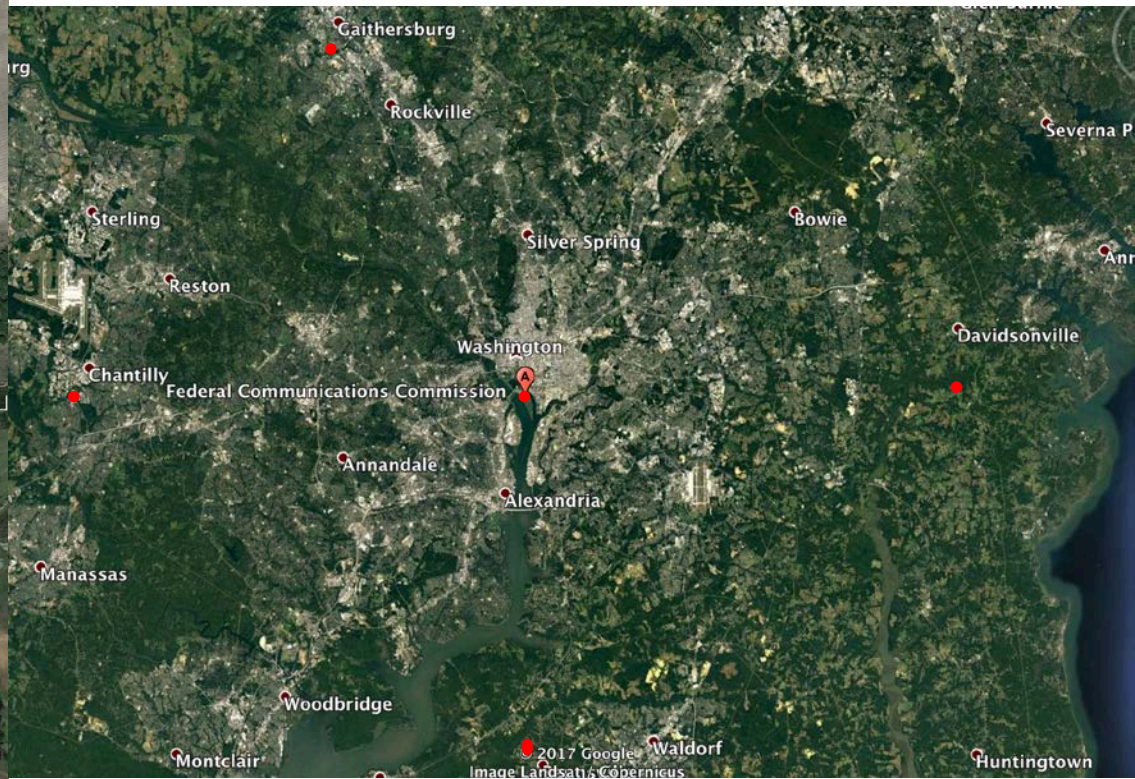
V-Band: Current Plan and Proposals



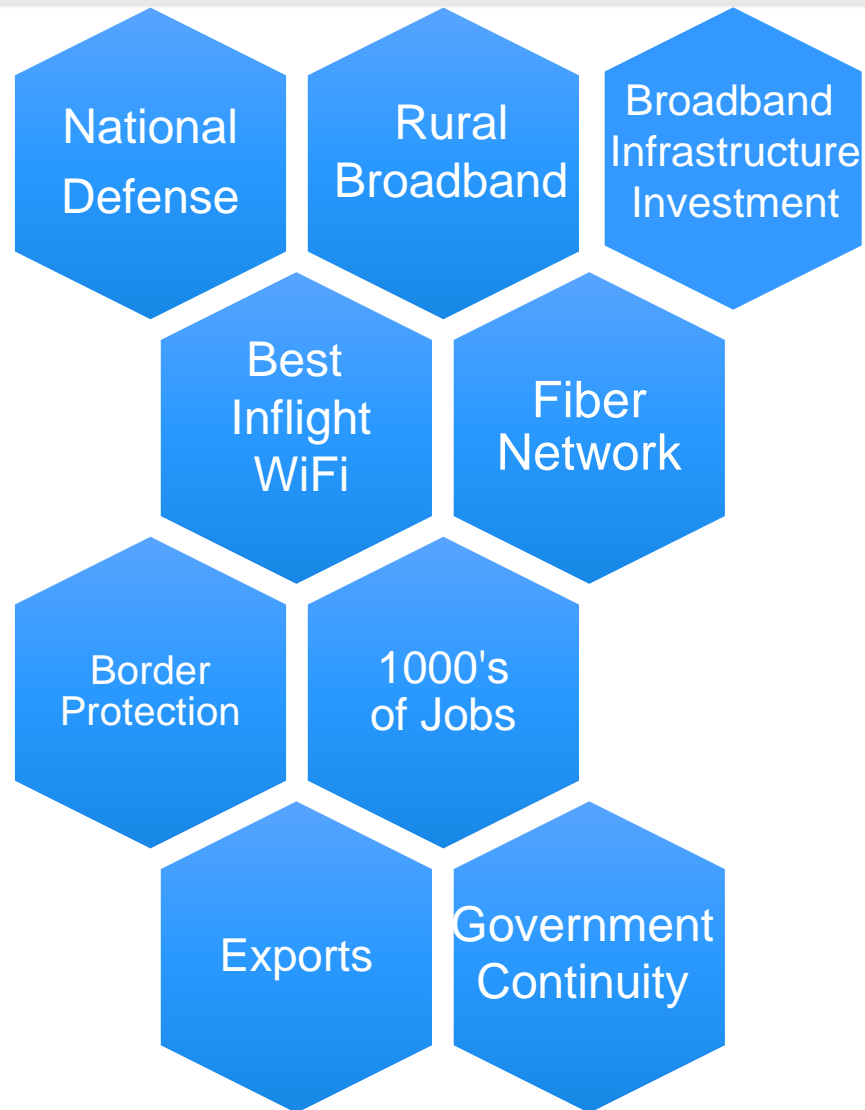
ViaSat 5G Coexistence Studies



Small Impact of Satellite V-band Sharing



Huge Impact of Enabling Satellite V Band Access



ViaSat Coexistence Proposal (1)

- » 48.2-50.2 GHz and 40-42 GHz
 - » Maintain longstanding designation for unfettered satellite gateways and user terminals
 - » Any terrestrial use should not impair satellite use
- » 47.2-48.2/50.4-52.4 GHz (uplinks)
 - » Inherent small GSO earth station compatibility --- no 5G impairment
 - » Feasible to deploy many small gateways via roof mounts and shielding techniques
 - » Avoids population
 - » Avoids major roads, rail lines, venues
 - » Urban, suburban and rural areas alike
 - » Where no impairment occurs, no need to restrict gateway deployment
 - » Defining protection criteria enables
 - » Development of suitable sharing rules
 - » Maximization of spectrum use
 - » Reliable operation of both services
 - » ITU criteria for 5G enables calculation of suitable criteria today
 - » Earth station emissions below that level/away from 5G receivers are not an issue
- » 37.5-40 GHz (downlinks)
 - » Same types of techniques allow earth station receivers to coexist with 5G
 - » Urban, suburban and rural areas alike

ViaSat Coexistence Proposal (2)

- » Concepts easily can be extended to accommodate larger earth stations and NGSO constellations
- » But no basis to revisit prior rejection of proposals to exclude earth station deployment in urban areas
 - › Such restrictions would “provide[] less predictability regarding the locations of future earth stations, and . . . limit[] the ability of FSS to deploy near population centers.” Spectrum Frontiers Order, para 60.

Conclusion

- » High impact, low cost sharing solutions are available
- » Feasible to accommodate both satellite and terrestrial needs
- » Facilitating multiple technologies provides maximum consumer benefit